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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,732	03/01/2002	Takashi Kitaguchi	220147US2	8415
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ABDULSELAM, ABBAS I	
			ART UNIT 2677	PAPER NUMBER
DATE MAILED: 12/29/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/085,732	<b>Applicant(s)</b> KITAGUCHI ET AL.	
	<b>Examiner</b> Abbas I. Abdulsalam	<b>Art Unit</b> 2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed on 10/13/05 have been fully considered but they are not persuasive.

With respect to independent claims 1, 23-24 and 31, Applicant argues that the references cited do not teach that by blocking the projection image projected by the projecting part at a time of the photographing operation, an image on the writing surface can be more clearly photographed. With respect to claim 38, Applicant also argues that the cited references do not teach a shifting part shifting a photography area of the photography part on the writing surface, and the photography part taking a photograph at least two times in a manner such that the photography area is shifted each time by the shifting part.

However, as shown in the art rejection below, Platzker teaches a projector (24) projecting the computer generated computer display image onto the writing surface (21) interposed with the projected image (col. 6, lines 35-45 and Fig. 2A).

Hendriks (USPN 6707444) teaches a rear projection system including a screen 2' which is typically translucent so that light pen 4' can be tracked by the camera 8' via reflecting mirror (5), and so that the user on one side of the screen can view the images projected on the other side of the screen by the projector 6'. See Fig. 1B (2', 4', 8'), col. 2, lines 65-67 and col. 3, lines 1-25).

Rodriguez (USPN 5826962) teaches a movable shutter member 62, (see Fig. 5 (62)) as a light blocking means, which is movably mounted in housing 12 and functions as a means for

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blocking light beam D from projecting to overhead projector member 13 (col. 3, lines 62-67, col.4, lines 1-2 and Fig. 5 (62)).

Ishizawa (5864638) teaches that when an operator designates shifting of the photographic area 230 with the PD 205, the photographic area 230 is shifted in the frame buffer 202, as shown in FIG. 25(d) and the corresponding photographic area on CRT 203 is shifted accordingly (col. 13, lines 35-43).

It would have been obvious to one of ordinary skill in the art to utilize Hendriks' rear projection system including a camera's 8' with respect to any desired features in the other references.

In response to applicant's argument that none of the references teach the limitations mentioned above, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 1, 23-24 and 31 are amended to include a limitation which reads as “when said photography part photographs an image”, and the limitation is followed by “said blocking part blocks.....”. The relationship between the new limitation and the following “blocking part” is unclear for one of ordinary skill in the art to ascertain the point. Proper correction is needed.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10-16 and 23-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platzker et al. (USPN 6388654) in view of Hendriks (USPN 6707444) and Rodriguez (USPN 5826962).

Regarding claims 1, 23-24, and 31, Platzker teaches an image sensor (22) to capture images of a local writing surface (21) continuously into a computer (23). Platzker teaches a projector (24) projecting the computer generated computer display image onto the writing surface (21) interposed with the projected image (col. 6, lines 35-45 and Fig. 2A). Platzker discloses a local storage device (26) in connection with the arrangement discussed above (Fig.

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2A) and indicates that the steps including the projection mechanism are implemented using computer software, resident and operation in the computer device (23). See col. 5, lines 57-61, col. 6, lines 2-5 and Fig. 3. Platzker also teaches a plurality of image processing sites (A through E) interconnected by a communication infrastructure (11), which may be local area network (LAN), Internet or other types of communication channel. See col. 5, lines 17-35 and Fig. 1.

However, Platzker does not teach, projection from a rear side, and a photography part photographing an image drawn on the writing surface from the rear side.

Hendriks on the other hand teaches a rear projection system including a screen 2' which is typically translucent so that light pen 4' can be tracked by the camera 8' via reflecting mirror (5), and so that the user on one side of the screen can view the images projected on the other side of the screen by the projector 6'. See Fig. 1B (2', 4', 8'), col. 2, lines 65-67 and col. 3, lines 1-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Platzker's projection system shown in Fig. 2A to incorporate Hendriks' rear projection as demonstrated in Fig. 1 because the use of rear projection helps function a projector with camera arrangement in as taught by Hendriks (col. 3, lines 41-45).

Platzker does not teach, "a blocking part blocking a light beam emitted from a projecting part projecting the light beam onto the projection surface so as to display the projection image

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thereon, wherein the blocking part blocks the light beam emitted from projecting part so as to prevent all of the light beam from being applied to the projection surface”.

Rodriguez on the other hand teaches a movable shutter member 62, (see Fig. 5 (62)) as a light blocking means, which is movably mounted in housing 12 and functions as a means for blocking light beam D from projecting to overhead projector member 13 (col. 3, lines 62-67, col.4, lines 1-2 and Fig. 5 (62)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Platzker's projection system shown in Fig. 2a to incorporate Rodriguez' movable shutter member (62) as configured in Fig. 5 because the use of shutter helps as light blocking tool for a projector as taught by Rodriguez (col. 3, lines 62-67).

Regarding claim 2, Hendriks teaches a movable infrared (IR) light emitter on a stylus located at some point in the projection plane. See col. 4, lines 23-30.

Regarding claim 3, as shown in Fig. 2A, Platzker teaches a projection surface and writing surface being one and the same. See Fig. 2A (21).

Regarding claims 4, 25, and 32, Platzker discloses that a combination resulting from local markings and projections of remote site's markings appear on the local projection surface. See col. 3, lines 18-33.

Regarding claims 5, 26, and 33, Platzker teaches as shown in Fig. 1 that each site A, B and C can operate in either receive mode, transmit mode or both simultaneously. See col. 5, lines 21-26.

Regarding claim 6, Platzker discloses a calibration process with respect to an image sensor (22) and a writing surface (21). See col. 8, lines 24-42.

Regarding claim 7, Platzker teaches writing surfaces of sites A, B and C as shown in Fig. 1 as [21A] through [21C] as well as projection surface [21D] of site D and monitor [12] of site E. See col. 6, lines 13-19 and Fig. 1.

Regarding claim 8, Platzker teaches the inputs and output of the image process including the changes in local markings and changes in projections with respect to a writing surface (21). See col. 10, lines 19-41.

Regarding claims 10, 27-28, and 35-36, Platzker teaches the image sensor is optimally focused at each time. Platzker adds that the focusing of projections can be either performed manually to the user's satisfaction or it can be performed automatically. It would have been obvious that one can use the focusing which equivalently provides the desired "shifting of a photography area". See col. 7, lines 58-63. Platzker also teaches that production of composite images that can be created by merging any number of input images. See col. 10, lines 67 and col. 11, lines 1-3.

Regarding claim 11, Platzker teaches that a pixel that is part of the writing in one or more input images will be assigned a non-background color, and elaborates a merging algorithm that applies to a relatively small number of pixels. See col. 11, lines 8-23.



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Regarding claims 12, 15-16, 29-30, 34, and 37, Platzker teaches a computer processing the viewed image signals or “frames” representing the images appearing in the viewing field of the local image sensor indicative the markings made on the writing surface. Platzker also teaches changes are detected between successive frames that would lead to compressed representation of changes. See col. 4, lines 24-43.

Regarding claims 13-14, Hendriks teaches that the images projected by the camera on the screen, representing the user's writing strokes, and are derived from a display screen buffer. Hendriks also teaches that the contents of the display screen buffer depend on optical screen marking events such as those generated by the light pen.

4. Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platzker in view of Hendriks and Rodriguez as applied to claims 1-16 and further in view of Dreyer et al. (USPN 5504544).

Regarding claims 17-18, Platzker as modified has been discussed above. Particularly, Hendriks teaches a bright IR source which illuminates the whiteboard. However, Platzker as modified does not teach a lighting part illuminating the writing surface from a side as well as opposite to a side on which the photography part is provided.

Dreyer on the other hand teaches that light is directed in to illuminate one of the two sides of linear prisms before directing toward an optical window as a collimated beam (col. 3, lines 7-15 and Fig. 3 (9)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the modified Platzker's projection system shown in Fig. 2a to adapt Dreyer's illumination with respect to prisms as demonstrated in Fig. 3 because illumination of linear prisms provides an efficient projection system as taught by Dreyer (col. 2, lines 5-8)

Regarding claims 19-20, Dreyer teaches a projection system with multiple lamps and illustrates symmetric Pyrex condenser (29), which forms an elliptical shaped beam (Fig. 8). See the abstract

Regarding claims 21-22, Dreyer discloses the integration of light from multiple sources such that high chromatic dispersion of the refracting elements is taken into account. See col. 1, lines 66-70 and col. 2, lines 1-2.

5. Claims 38-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platzker et al. (USPN 6388654) in view Hendriks (USPN 6707444) and Ishizawa et al. (USPN 5864638).

Regarding claim 38, Platzker teaches an image sensor (22) to capture images of a local writing surface (21) continuously into a computer (23). Platzker teaches a projector (24) projecting the computer generated computer display image onto the writing surface (21) interposed with the projected image. See col. 6, lines 35-45 and Fig. 2A. Platzker discloses a local storage device (26) in connection with the arrangement discussed above (Fig. 2A) and indicates that the steps including the projection mechanism are implemented using computer software, resident and operation in the computer device (23). See col. 5, lines 57-61, col. 6, lines

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2-5 and Fig. 3. Platzker also teaches a plurality of image processing sites (A through E) interconnected by a communication infrastructure (11), which may be local area network (LAN), Internet or other types of communication channel. See col. 5, lines 17-35 and Fig. 1.

However, Platzker does not teach, projection from a rear side, and a photography part photographing an image drawn on the writing surface from the rear side.

Hendriks on the other hand teaches a rear projection system including a screen 2' which is typically translucent so that light pen 4' can be tracked by the camera 8' via reflecting mirror (5), and so that the user on one side of the screen can view the images projected on the other side of the screen by the projector 6'. See Fig. 1B (2', 4', 8'), col. 2, lines 65-67 and col. 3, lines 1-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Platzker's projection system shown in Fig. 2A to incorporate Hendriks' rear projection as demonstrated in Fig. 1 because the use of rear projection helps function a projector with camera arrangement in as taught by Hendriks (col. 3, lines 41-45).

Platzker does not teach "a shifting part shifting a photography area of the photography part on the writing surface".

Ishizawa (5864638) on the other hand teaches that when an operator designates shifting of the photographic area 230 with the PD 205, the photographic area 230 is shifted in the frame

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buffer 202, as shown in FIG. 25(d) and the corresponding photographic area on CRT 203 is shifted accordingly (col. 13, lines 35-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Platzker's image projection shown in Fig. 2A to incorporate Ishizawa's shifting of photographic areas as demonstrated in Fig. 25 because shifting of photographic areas helps image editing procedures as taught by Ishizawa (col. 3, lines 22-24).

Regarding claim 39, Hendriks teaches a movable infrared (IR) light emitter on a stylus located at some point in the projection plane. See col. 4, lines 23-30.

Regarding claim 40, as shown in Fig. 2A, Platzker teaches a projection surface and writing surface being one and the same. See Fig. 2A (21).

Regarding claim 41, Platzker discloses that a combination resulting from local markings and projections of remote site's markings appear on the local projection surface. See col. 3, lines 18-33.

Regarding claim 42, Platzker teaches as shown in Fig. 1 that each site A, B and C can operate in either receive mode, transmit mode or both simultaneously. See col. 5, lines 21-26.

Regarding claim 43, Platzker discloses a calibration process with respect to an image sensor (22) and a writing surface (21). See col. 8, lines 24-42.

Regarding claim 44, Platzker teaches writing surfaces of sites A, B and C as shown in Fig. 1 as [21A] through [21C] as well as projection surface [21D] of site D and monitor [12] of site E. See col. 6, lines 13-19 and Fig. 1.

Regarding claim 45, Platzker teaches the inputs and output of the image process including the changes in local markings and changes in projections with respect to a writing surface (21). See col. 10, lines 19-41.

Regarding claims 46-47, Platzker teaches the image sensor is optimally focused at each time. Platzker adds that the focusing of projections can be either performed manually to the user's satisfaction or it can be performed automatically. It would have been obvious that one can use the focusing which equivalently provides the desired "shifting of a photography area". See col. 7, lines 58-63. Platzker also teaches that production of composite images that can be created by merging any number of input images. See col. 10, lines 67 and col. 11, lines 1-3.

Regarding claims 48-49, Hendriks teaches that the images projected by the camera on the screen, representing the user's writing strokes, and are derived from a display screen buffer. Hendriks also teaches that the contents of the display screen buffer depend on optical screen marking events such as those generated by the light pen.

Regarding claims 50-51, Platzker teaches a computer processing the viewed image signals or "frames" representing the images appearing in the viewing field of the local image sensor indicative the markings made on the writing surface. Platzker also teaches changes are detected between successive frames that would lead to compressed representation of changes. See col. 4, lines 24-43.

6. Claims 52-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platzker in view of Hendriks and Ishizawa as applied in claims 38-51 and further in view of Dreyer et al. (USPN 5504544).

Regarding claims 52-53, Platzker as modified has been discussed above. Particularly, Hendriks teaches a bright IR source which illuminates the whiteboard. However, Platzker as modified does not teach a lighting part illuminating the writing surface from a side as well as opposite to a side on which the photography part is provided.

Dreyer on the other hand teaches that light is directed in to illuminate one of the two sides of linear prisms before directing toward an optical window as a collimated beam (col. 3, lines 7-15 and Fig. 3 (9)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the modified Platzker's projection system shown in Fig. 2a to adapt Dreyer's illumination with respect to prisms as demonstrated in Fig. 3 because illumination of linear prisms provides an efficient projection system as taught by Dreyer (col. 2, lines 5-8)

Regarding claims 54-55, Dreyer teaches a projection system with multiple lamps and illustrates symmetric Pyrex condenser (29), which forms an elliptical shaped beam (Fig. 8). See the abstract.

Regarding claims 56-57, Dreyer discloses the integration of light from multiple sources such that high chromatic dispersion of the refracting elements is taken into account. See col. 1, lines 66-70 and col. 2, lines 1-2.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Abbas Abdulsalam

Examiner

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December 26, 2005

AMR A. AWAD  
PRIMARY EXAMINER  
